

EXHIBIT 3

Complete list of parties and counsel listed on signature pages.

**UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF CALIFORNIA
SAN JOSE DIVISION**

VOIP-PAL.COM, INC., a Nevada
corporation,

Plaintiff,

v.

TWITTER, INC., a Delaware corporation,

Defendant.

Case No. 18-cv-04523-LHK [Lead Case]

**JOINT INVALIDITY CONTENTIONS OF
TWITTER, INC.; VERIZON; AT&T CORP;
AND APPLE INC.**

VOIP-PAL.COM, INC., a Nevada
corporation,

Plaintiff,

v.

CELLCO PARTNERSHIP d/b/a/ Verizon
Wireless,

Defendants.

Case No. 18-cv-06054-LHK

VOIP-PAL.COM, INC., a Nevada
corporation,

Plaintiff,

v.

AT&T CORP, a Delaware corporation,

Defendant.

Case No. 3:18-cv-06177-LHK

1 VOIP-PAL.COM, INC., a Nevada
2 corporation,

3 Plaintiff,

4 v.

5 APPLE INC., a California corporation,

6 Defendant.

Case No. 3:18-cv-06217-LHK

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Pursuant to the Court’s Case Management Order of January 16, 2019, defendants Twitter, Inc. (“Twitter”); Cellco Partnership (“Verizon”); AT&T Corp. (“AT&T”); and Apple Inc. (“Apple”) (collectively, “Defendants”) hereby jointly submit the following Initial Invalidity Contentions regarding U.S. Patent Nos. 8,542,815 (the “’815 patent”) and 9,179,005 (the “’005 patent”) (collectively, the “Asserted Patents”).

Plaintiff VoIP-Pal.com, Inc. (“VoIP-Pal”) alleges in its Initial Infringement Contentions that Defendants infringe claims 1, 7, 12, 27, 28, 72, 73, 92, and 111 of the ’815 patent and claims 49, 73, 74, 75, 77, 78, 83, 84, 94, 96, and 99 of the ’005 patent (collectively, the “Asserted Claims”). As discussed below, Defendants contend that each of the Asserted Claims is invalid under at least 35 U.S.C. §§ 101, 102, 103, and/or 112.

1. Preliminary Statement And Reservation Of Rights

Defendants’ Initial Invalidity Contentions reflect Defendants’ present knowledge and contentions regarding the Asserted Claims. Thus, the following contentions are based on Defendants’ current knowledge, understanding, and belief as to the facts and information available as of the date of these Invalidity Contentions. Discovery has not yet been completed in this matter. Thus, Defendants have not yet completed their investigation, discovery, or analysis of matters relating to the invalidity of the Asserted Claims, including without limitation invalidity due to on-sale or public use statutory bars. In addition, Defendants’ search for prior art is ongoing. Accordingly, Defendants reserve the right to amend, modify, and supplement, without prejudice, these Invalidity Contentions as additional information is discovered or otherwise identified or appreciated, including testimony about the scope and content of the claimed inventions or state of the prior art.

Defendants submit these Initial Invalidity Contentions without waiving Defendants’ position that VoIP-Pal’s Infringement Contentions do not adequately identify with sufficient specificity the basis for VoIP-Pal’s contention that any accused product meets the limitations of any of the Asserted Claims. Nothing stated herein is or shall be treated as an admission or suggestion that Defendants agree with VoIP-Pal regarding either the scope of any of the Asserted Claims or the claim constructions advanced directly or implicitly by VoIP-Pal’s Infringement

1 Contentions or in any other pleading, discovery request or response, or written or verbal
2 communications with Defendants. Additionally, nothing in these Initial Invalidity Contentions
3 shall be treated as an admission that any of Defendants' accused products meet any limitation of
4 the Asserted Claims. The disclosures herein are not and should not be construed as a statement
5 that no other persons have discoverable information, that no other documents, data compilations,
6 or tangible things exist that Defendants may use to support their claims or defenses, or that no
7 other legal theories or factual bases will be pursued.

8 In the absence of a claim construction order from the Court, Defendants have based these
9 Initial Invalidity Contentions upon Defendants' knowledge and understanding of the potential
10 scope of the Asserted Claims at this time, and, in part, upon the apparent constructions of the
11 Asserted Claims advanced by VoIP-Pal in its Infringement Contentions. Furthermore, VoIP-
12 Pal's Infringement Contentions contradict the teaching of the Asserted Patents, contradict the
13 understanding of the claim terms by a person of ordinary skill, and are vague and conclusory
14 concerning how certain claim limitations supposedly read on the accused products or activities.
15 Thus, Defendants are unable to discern VoIP-Pal's position regarding the construction of
16 numerous claim limitations and have provided these Initial Invalidity Contentions based in part
17 on its present understanding of VoIP-Pal's apparent constructions. Finally, Defendants' Initial
18 Invalidity Contentions do not necessarily represent Defendants' agreement or view as to the
19 meaning of any claim term contained therein, and Defendants may disagree with VoIP-Pal's
20 interpretation of the meaning of many terms and phrases in the Asserted Claims. In addition,
21 Defendants' Initial Invalidity Contentions do not necessarily represent Defendants' agreement or
22 view as to whether any claim preamble is a limitation of the claim.

23 Defendants' Initial Invalidity Contentions should not be interpreted to rely upon, or in
24 any way affect, the non-infringement arguments Defendants intend to assert in this case.
25 Defendants also anticipate that the Court's construction of claim terms may significantly affect
26 the scope of the Asserted Claims. Therefore, Defendants reserve the right to supplement, without
27 prejudice, these Initial Invalidity Contentions as appropriate depending upon the Court's
28 construction of the Asserted Claims, any findings as to the priority date of the Asserted Patents,

1 and positions that VoIP-Pal or its expert witnesses may take concerning claim interpretation,
2 infringement, or invalidity issues.

3 Defendants provide certain claim charts as described herein. The claim charts reflect the
4 theories of invalidity described in each chart, including anticipation and obviousness. The
5 suggested obviousness combinations are in the alternative to Defendants' anticipation
6 contentions. The disclosed obvious combinations are not meant to be exhaustive and should not
7 be construed to suggest that any reference is not anticipatory in its own right. As reflected in the
8 attached exhibits, the discussion herein, and in the references themselves, all elements of VoIP-
9 Pal's Asserted Claims, arranged as claimed in the Asserted Claims, were disclosed in the art
10 before the Asserted Patents' earliest possible priority date, and one of ordinary skill in the art
11 would have readily fit their teachings together. Each of the references cited herein or in the
12 attached exhibits may be combined and modified in a number of obvious ways to achieve the
13 claimed apparatus and systems, including those disclosed in the attached exhibits.

14 Defendants further contend that various asserted claims of the Asserted Patents are
15 invalid for failure to satisfy the enablement, written description, or definiteness requirements of
16 35 U.S.C. § 112. Defendants' contentions are based in whole or in part on its present
17 understanding of the Asserted Claims and VoIP-Pal's apparent construction of those claims in
18 its Infringement Contentions. Accordingly, Defendants' invalidity contentions based upon 35
19 U.S.C. § 112 may reflect alternative positions as to claim construction and scope. Further, by
20 asserting grounds for invalidity based on VoIP-Pal's apparent claim construction or any other
21 particular claim construction, Defendants are not adopting VoIP-Pal's claim construction, or
22 admitting to the accuracy of any particular claim construction.

23 **2. Priority Of The Asserted Patents**

24 In its Infringement Contentions, Plaintiff contends that the Asserted Patents are entitled
25 at least to the priority date of U.S. provisional application No. 60/856,212, filed on November 2,
26 2006. Plaintiff further claims a conception date for the inventions claimed in the Asserted Patents
27 by January 31, 2005, and a reduction to practice date by June 6, 2005.

Plaintiff is not entitled to a priority date earlier than the first non-provisional application PCT/CA2007/001956 on November 1, 2007 (and even that application fails to provide adequate support for the full scope of the asserted claims). First, a “patent is only entitled to claim the benefit of the filing date of its provisional application if the disclosure of the provisional application provides support for the claims . . . in compliance with § 112, ¶ 1.” *Dynamic Drinkware v. Nat’l Graphics Inc.*, 800 F.3d 1375, 1381 (Fed. Cir. 2015). The provisional application identified by Plaintiff does not meet this requirement for either of the Asserted Patents and therefore Plaintiff cannot claim priority to the provisional application’s filing date.

Further, Plaintiff’s general contention that it “intends to demonstrate a conception date for the inventions claimed in the Patents-in-Suit by January 31, 2005 and a reduction to practice date for the inventions claimed in the Patents-in-Suit by June 6, 2005,” fails to sufficiently disclose any basis for an earlier priority date for the Asserted Patents.

3. Invalidity Of The Asserted Claims Under 35 U.S.C. §§ 102 And 103

Defendants contend that each Asserted Claim is invalid at least under 35 U.S.C. § 102, including subsections 102(a), 102(b), 102(e), and 102(g), and/or 35 U.S.C. § 103 as set forth in the attached Exhibits A-1–B-49.¹ Pursuant to the Court’s Case Management Order, Defendants identify herein prior art patents, publications, disclosures, products/devices/systems, and uses that anticipate or render obvious the Asserted Claims under 35 U.S.C. §§ 102 or 103. Defendants reserve the right to rely on other references disclosed or incorporated by reference in these Initial Invalidity Contentions, in the prior art identified below, in the Asserted Patents, or any related patents, in the file history of the Asserted Patents or any related patents, and in the attached exhibits.

Defendants’ detailed contentions as to how each identified prior art reference either anticipates or renders obvious in claim chart form are attached as Exhibits A-1–B-49. Defendants’ claim charts may disclose multiple theories of invalidity in a single chart. Each chart directed to an anticipatory product/system also discloses how the product/system alone in

¹ Exhibits with numbers starting with “A” correspond to invalidity charts for the ’815 patent; exhibits with numbers starting with “B” correspond to invalidity charts for the ’005 patent.

1 light of the knowledge and skill in the art, or in light of other references, renders each asserted
2 claim obvious. Additionally, each chart directed to an anticipatory patent or non-patent
3 publication also discloses how that reference in combination with one or more other references
4 renders each Asserted Claim obvious.

5 Pursuant to the Court's Case Management Order and the Local Patent Rules, Defendants
6 attach charts identifying exemplary prior art that anticipates or renders obvious each of the
7 Asserted Claims, as set forth in Exhibits A-1–B-49. For each Asserted Claim that is anticipated
8 or rendered obvious by an exemplary reference or combination, the corresponding claim chart
9 includes a citation to that reference or combination for each limitation. Where Defendants cite
10 to a particular figure in a prior art reference, the citation should be understood to encompass the
11 caption and description of the figure as well as any text relating to the figure in addition to the
12 figure itself. Conversely, where a cited portion of text refers to a figure, the citation should be
13 understood to include the figure as well. Furthermore, while Defendants have identified at least
14 one citation per limitation present in a reference or combination, each and every disclosure of the
15 same or similar limitation in the same reference or combination is not necessarily identified. In
16 an effort to focus the issues, Defendants cite only particularly pertinent portions of identified
17 references, even where a reference or combination may contain additional support for a particular
18 claim element. Thus, Defendants may rely on uncited portions of the prior art references for
19 additional support for a particular element. Defendants may rely upon other prior art identified
20 in future supplements, corroborating references, documentation, source code, products, and
21 testimony, including materials obtained through further investigation and third-party discovery
22 of the prior art identified herein, that demonstrates the invalidating functionality identified in
23 these Initial Invalidity Contentions or that show the state of the art in the relevant time period
24 (irrespective of whether such references themselves qualify as prior art to the Asserted Patent),
25 and expert testimony to provide context to or aid in understanding the cited portions of the
26 identified prior art. Similarly, where there are multiple references relating to a single prior art
27 product or system, Defendants may cite only to a single reference for a particular limitation, even
28 though other references may also contain similar teachings. Thus, Defendants may rely on

1 uncited references relating to a particular prior art document or system for additional support for
2 a particular element. Any prior art disclosed as anticipating a limitation also renders that
3 limitation obvious.

4 Additionally, persons of ordinary skill in the art generally read a prior art reference as a
5 whole and in the context of other publications and literature. Numerous prior art references,
6 including those identified herein and in the attached exhibits, reflect common knowledge and the
7 state, scope, and content of the prior art before the priority date of the Asserted Claims of the
8 Asserted Patents. Defendants may rely on uncited portions of the prior art references and on
9 other publications and expert testimony to provide context and as aids to understanding and
10 interpreting the portions that are cited.

11 In general, a claimed invention is invalid due to obviousness “if the differences between
12 the claimed invention and the prior art are such that the claimed invention as a whole would have
13 been obvious before the effective filing date of the claimed invention to a person having ordinary
14 skill in the art.” 35 U.S.C. § 103; *Graham v. John Deere Co.*, 383 U.S. 1, 13-14 (1966). The
15 ultimate determination of whether an invention is or is not obvious is a legal conclusion based
16 on underlying factual inquiries including: “(1) the scope and content of the prior art; (2) the
17 differences between the prior art and the claims; (3) the level of ordinary skill in the art at the
18 time of invention; and (4) objective evidence of nonobviousness.” *Miles Labs., Inc. v. Shandon,*
19 *Inc.*, 997 F.2d 870, 877 (Fed. Cir. 1993); *see Graham*, 383 U.S. at 17-18. The U.S. Supreme
20 Court decision in *KSR Int’l Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 1739 (2007) reaffirmed *Graham*,
21 but further held that a claimed invention can be obvious even if there is no explicit teaching,
22 suggestion, or motivation for combining the prior art to produce that invention.

23 To the extent that any claim limitation is not anticipated pursuant to 35 U.S.C. § 102,
24 Defendants contend that any purported differences are such that the claimed subject matter as a
25 whole would have been obvious to one skilled in the art at the time of the alleged invention, in
26 view of the state of the art and knowledge of those skilled in the art under 35 U.S.C. § 103. Each
27 Asserted Claim would have been obvious in view of each reference cited in Exhibits A-1–B-49
28 either alone or combined with the knowledge that was possessed by one of ordinary skill in the

1 art. Additionally, each Asserted Claim would have been obvious to one of ordinary skill in the
2 art in view of the combination of any one of the prior art references identified in Exhibits A-1–
3 B-49 with one or more of the other references identified in the tables below.

4 In particular, those of ordinary skill in the art at the time of the alleged invention of the
5 Asserted Patents would have been motivated to modify or combine the prior art references set
6 forth herein because, inter alia: (a) the references in general deal with the same or related subject
7 matter; (b) one of ordinary skill in the art would have been motivated by the problem that the
8 inventor was attempting to solve, or with other problems that would have been faced in reaching
9 a solution, and would have looked to references that concerned similar issues or taught how to
10 overcome the problems faced; (c) the combinations were obvious to try and would have operated
11 in their known and expected way; (d) the combinations were within the technical skill and
12 understanding of a person of ordinary skill in the art; (e) the combinations would have been
13 motivated by the developments in technology; and (f) the combinations reflect various design
14 choices that would have been known to one of ordinary skill in the art and within that person’s
15 technical capability to implement (i.e. technically feasible).

16 The various motivations described above provide a basis for combining or modifying
17 references, as detailed below, to render each of the Asserted Claims obvious. In addition, the
18 Court can consider the inferences and creative steps a person of ordinary skill in the art would
19 employ in making such combinations. *See KSR*, 127 S. Ct. at 1741 (“a court can take account of
20 the inferences and creative steps that a person of ordinary skill in the art would employ”).

21 Defendants have identified a non-exhaustive list of one or more potential combinations
22 that would render each of the Asserted Claims of the Asserted Patents obvious in the claim charts
23 identified by exhibit number in the table below. Specifically, Defendants contend that the
24 following references anticipate or render obvious (alone, or in combination with other references
25 as set forth in detail in each claim chart) the Asserted Claims:

a. Systems

TABLE 1					
Exhibit No.	Name of System	Publicly known, in use, on sale, or sold in the U.S. at least by	Exemplary Publications Describing the System	Publication Date	Production Number
A-1, B-1	Vonage	9/22/2003	Vonage Holdings Corporation Petition for Declaratory Ruling Concerning an Order of the Minnesota Public Utilities Commission, WC 03-211 ("Vonage FCC Petition")	Filed 9/22/2003	DEFCOMM ON00056739
			Letter from William B. Wilhelm, Jr., Counsel for Vonage, to Marlene H. Dortch, Secretary, FCC, WC Docket No. 03-211 ("Vonage FCC Wilhelm Letter")	Filed 10/1/2004	DEFCOMM ON00056881
			FCC In the Matter of Vonage Holdings Corporation WC Docket No. 03-211, ("Vonage FCC Order")	Released 11/12/2004	DEFCOMM ON00056698
			<i>Digifonica Partner Program Guide</i> , VPLM00006360-	Spring 2005	VPLM00006360- VPLM00006397

TABLE 1					
Exhibit No.	Name of System	Publicly known, in use, on sale, or sold in the U.S. at least by	Exemplary Publications Describing the System	Publication Date	Production Number
			VPLM00006397 (“Digifonica Comparison”)		
			Vonage Holdings Corporation 2006 10-K form. Retrieved from https://ir.vonage.com/financials/annual-reports (“Vonage 10-K Form 2006”)	2007	DEFCOMM ON00056556
			<i>Vonage 311</i> , Vonage, http://www.vonage.com/no_flash/features.php?feature=311 (“Vonage Website 311”)	11/6/2004	DEFCOMM ON00057084
			<i>7-Digit Dialing</i> , Vonage, http://www.vonage.com/no_flash/features.php?feature=7_digit_dialing (“Vonage Website 7-Digit Dialing”)	11/6/2004	DEFCOMM ON00057083
			<i>Free Calling</i> , Vonage, http://www.vonage.com/no_flash/features.php?feature=subscriber_to_subscriber	11/6/2004	DEFCOMM ON00057088

TABLE 1					
Exhibit No.	Name of System	Publicly known, in use, on sale, or sold in the U.S. at least by	Exemplary Publications Describing the System	Publication Date	Production Number
			("Vonage Website Free Calling")		
			U.S. Patent No. 7,453,990, ("Welenson '990").	Filed 6/22/2004; published 8/11/2005; issued 11/18/2008	DEFCOMM ON00056544
			3-Way Calling, Vonage, http://www.vonage.com/no_flash/features.php?feature=3_way_calling	November 6, 2004	DEFCOMM ON00057082
A-2, B-2	Avaya	6/2005	<i>Understanding VoIP: Leveraging Technology for a Competitive Edge</i> , Avaya ("Avaya VoIP White Paper")	10/2005	DEFCOMM ON00036658
			<i>Feature Description and Implementation for Avaya Communication Manager</i> ("Avaya Feature Description")	6/2005	DEFCOMM ON00036689
			<i>Administrator Guide for Avaya Communication Manager</i> , Issue 1	6/2005	DEFCOMM ON00038133

TABLE 1					
Exhibit No.	Name of System	Publicly known, in use, on sale, or sold in the U.S. at least by	Exemplary Publications Describing the System	Publication Date	Production Number
			("Avaya Administrator Guide")		
			<i>Configuring H.323 Signaling and IP Trunks between Avaya Communication Manager and Cisco CallManager 4.0</i> , Issue 1.0 ("Avaya Cisco Configuration")	4/8/2005	DEFCOMM ON00039820
			<i>Configuring Avaya Communication Manager with a Multi Location Dial Plan</i> , Issue 1.0 ("Avaya Multi Location Dial Plan Notes")	3/18/2004	DEFCOMM ON00039789
			<i>Application Notes for H.323 Voice over IP Trunking between Avaya Communication Manager and VoIP Americas Nativevoip VoIP Service</i> , Issue 1.0 ("Avaya NativeVoIP Gateway Configuration").	6/16/2005	DEFCOMM ON00039807

TABLE 1					
Exhibit No.	Name of System	Publicly known, in use, on sale, or sold in the U.S. at least by	Exemplary Publications Describing the System	Publication Date	Production Number
A-3, B-3	Skype	1/18/2005	<i>Digifonica Partner Program Guide</i> , VPLM00006360- VPLM00006397 ("Digifonica Comparison")	Spring 2005	VPLM00006360- VPLM00006397
			<i>Skype - Free Internet telephony that just works</i> , Skype, http://www.skype.com/ ("Skype Website Introduction")	1/30/2005	DEFCOMM ON00056045; DEFCOMM ON00056048
			<i>How to Use SkypeOut</i> , Skype, http://www.skype.com/help/guides/skypeout.html ("How to Use SkypeOut")	1/27/2005	DEFCOMM ON00056043
			<i>About SkypeOut</i> , Skype, http://skype.com/products/skypeout/ ("About SkypeOut")	1/27/2005	DEFCOMM ON00055992
			<i>How to Use Skype</i> , Skype, http://www.skype.com/help/guides/usingskype.html ("How to Use Skype")	1/27/2005	DEFCOMM ON00056038

TABLE 1					
Exhibit No.	Name of System	Publicly known, in use, on sale, or sold in the U.S. at least by	Exemplary Publications Describing the System	Publication Date	Production Number
			<i>How to Remove a Contact</i> , Skype, http://www.skype.com/help/guides/remove.html (“Skype Website Speed-Dial”)	1/25/2005	DEFCOMM ON00056037
			Salman A. Baset and Henning Schulzrinne, <i>An Analysis of the Skype Peer-to-Peer Internet Telephony Protocol</i> , (“Baset Article”).	9/15/2004	DEFCOMM ON00055869
			Dennis Bergström, <i>An analysis of Skype VoIP application for use in a corporate environment</i> (“Bergström Article”)	10/2004	DEFCOMM ON00055891
			<i>How to Call – Skype User Guide</i> , Skype, http://www.skype.com:80/help/guides/call.html (“Skype Website Speed-Dial”)	10/26/2005	DEFCOMM ON00056097
			<i>Download Skype for Windows</i> ,	1/19/2005	DEFCOMM ON00056036

TABLE 1					
Exhibit No.	Name of System	Publicly known, in use, on sale, or sold in the U.S. at least by	Exemplary Publications Describing the System	Publication Date	Production Number
			Skype, http://www.skype.com/products/skype/windows/		
A-4, B-4	Skype 1.4	10/24/2005	<i>Skype - Free Internet telephony that just works</i> , Skype, http://www.skype.com/ (“Skype Website Introduction”)	10/30/2005	DEFCOMM ON00056142 ; DEFCOMM ON00056145 ; DEFCOMM ON00056148
			<i>How to Use SkypeOut</i> , Skype, http://www.skype.com/help/guides/skypeout.html (“How to Use SkypeOut”)	10/26/2005	DEFCOMM ON00056103
			<i>How to Use Skype</i> , Skype, http://www.skype.com/help/guides/usingskype.html (“How to Use Skype”)	10/27/2005	DEFCOMM ON00056098
			<i>How to Call – Skype User Guide</i> , Skype, http://www.skype.com:80/help/guides/call.html (“Skype Website Speed-Dial”)	10/26/2005	DEFCOMM ON00056097

TABLE 1					
Exhibit No.	Name of System	Publicly known, in use, on sale, or sold in the U.S. at least by	Exemplary Publications Describing the System	Publication Date	Production Number
			Salman A. Baset and Henning Schulzrinne, <i>An Analysis of the Skype Peer-to-Peer Internet Telephony Protocol</i> , (“Baset Article”).	9/15/2004	DEFCOMM ON00055869
			Dennis Bergström, <i>An analysis of Skype VoIP application for use in a corporate environment</i> (“Bergström Article”)	10/2004	DEFCOMM ON00055891
			Taavet Hinrikus, <i>Skype API, Version 1.2</i> (“Skype API”).	3/4/2005	DEFCOMM ON00055823
			Hao Wang, <i>Skype VoIP service-architecture and comparison</i> (“Wang Article”).	6/22/2005	DEFCOMM ON00055881
			<i>Digifonica Partner Program Guide</i> , VPLM00006360-VPLM00006397 (“Digifonica Comparison”)	Spring 2005	VPLM00006360-VPLM00006397

TABLE 1					
Exhibit No.	Name of System	Publicly known, in use, on sale, or sold in the U.S. at least by	Exemplary Publications Describing the System	Publication Date	Production Number
			<i>Download Skype for Windows, Skype, http://www.skype.com/products/skype/windows/</i>	10/26/2005	DEFCOMM ON00056096
A-5, B-5	Tenor	2001	<i>Tenor Call Routing Server Product Guide, Quintum Technologies, Inc.</i>	2003	DEFCOMM ON00056164
			<i>Tenor Call Routing, Quintum Technologies, Inc.</i>	2005	DEFCOMM ON00056270
			<i>Tenor Call Routing, Quintum Technologies, Inc.</i>	2001	DEFCOMM ON00056297
A-6, B-6	Asterisk	3/30/2003	Mark Spencer et al., <i>The Asterisk Handbook, Version 2</i>	3/30/2003	DEFCOMM ON00051219
			Jim Van Meggelen et al., <i>Asterisk The Future of Technology</i>	8/31/2005	DEFCOMM ON00051306
			Paul Mahler, <i>VoIP Telephony with Asterisk</i>	10/20/2005	DEFCOMM ON00052360

TABLE 1					
Exhibit No.	Name of System	Publicly known, in use, on sale, or sold in the U.S. at least by	Exemplary Publications Describing the System	Publication Date	Production Number
			David Gomillion et al., <i>Building Telephony Systems with Asterisk</i>	9/2005	DEFCOMM ON00051682
A-7, B-7	Cisco Call Manager	2001	<i>System Description for the Cisco Communications Network</i>	January 1999	DEFCOMM ON00050756
			David Bateman, <i>Configuring CallManager and Unity: A Step-by-Step Guide</i>	June 2005	DEFCOMM ON00049303
			<i>Cisco IP Telephony Network Design Guide</i>	December 2000	DEFCOMM ON00008286
			Dave Corley, <i>Distributed Enterprise Call Processing/Call Control Server (Cisco CallManager version 3.1 product requirements document)</i>	September 13, 2000	Cisco-VoIP Pal00000432
			<i>Cisco CallManager Service Enterprise</i>	September 19, 2003	Cisco-VoIP Pal00000475

TABLE 1					
Exhibit No.	Name of System	Publicly known, in use, on sale, or sold in the U.S. at least by	Exemplary Publications Describing the System	Publication Date	Production Number
			<i>Parameters for Parche Interface Specification</i>		
			Chu-shen Liu & Jessie Chang, <i>Cisco CallManager/IOS Gateway System Test Plan—Centralized Call Processing Deployment Model</i>	September 2, 2000	Cisco-VoIP Pal00000503
			John Restricket, <i>CallManager Architecture Overview, January 21, 2007</i>	January 21, 2007	Cisc-VoIP Pal00000594
			Marc Ayres et al., <i>Seadragon – GA Product Requirements Document</i>	May 2004	Cisco-VoIP Pal00000683
			Chris Pearce et al., <i>Cisco CallManager Fundamentals</i> , 1st edition	July 2001	Cisco-VoIP Pal00000807
			Chris Pearce et al., <i>Cisco CallManager Fundamentals</i> , 2d edition	September 2005	Cisco-VoIP Pal00000808

TABLE 1					
Exhibit No.	Name of System	Publicly known, in use, on sale, or sold in the U.S. at least by	Exemplary Publications Describing the System	Publication Date	Production Number
			Salvator Collora et al., <i>CallManager Best Practices</i> ,	June 2004	Cisco-VoIP Pal00000809
A-8, B-8	Broad Works	January 2001	<i>BroadSoft Product Overview PowerPoint (March 2002) ("BroadSoft Product Overview")</i>	March 2002	Cisco-VoIP Pal00004871
			<i>BroadWorks Product Specification, Release 4 (May 2001) ("BroadWorks Release 4")</i>	May 2001	Cisco-VoIP Pal00004872
			<i>BroadWorks Network Server Product Description Release 13 ("Network Server Release 13")</i>	2005	Cisco-VoIP Pal00004884
			<i>BroadWorks SIP Network Interface Interworking Guide Release 13.0 ("SIP 13")</i>	2005	Cisco-VoIP Pal00004870
			<i>BroadWorks SIP Network Interface Interworking</i>	2005	Cisco-VoIP Pal00004882

TABLE 1					
Exhibit No.	Name of System	Publicly known, in use, on sale, or sold in the U.S. at least by	Exemplary Publications Describing the System	Publication Date	Production Number
			<i>Guide Release 12.0</i> (“SIP 12”)		
			<i>BroadWorks Special Call Types Routing Guide Release 13</i> (“Special Call Types Routing”)	2005	Cisco-VoIP Pal00004879
			<i>Private Dial Plans - VoiceVPN Functional & Design Specifications</i> (“VoiceVPN”)	2001	Cisco-VoIP Pal00004883
			<i>Enhanced OCP (NCOS) Functional Specification</i> (“Enhanced OCP”)	2002	Cisco-VoIP Pal00004880
			<i>147-168 Outgoing Calling Plan</i> (“OCP”)	2001	Cisco-VoIP Pal00004876
			<i>Speed Dial Functional Specification</i> (“Speed Dial”)	2001	Cisco-VoIP Pal00004875
			<i>BroadWorks Functional Specification, Network Server, Release 6</i>	2001	Cisco-VoIP Pal00004881

TABLE 1					
Exhibit No.	Name of System	Publicly known, in use, on sale, or sold in the U.S. at least by	Exemplary Publications Describing the System	Publication Date	Production Number
			<i>BroadWorks Release 12 Bulletin</i>	May 2005	Cisco-VoIP Pal00000821
			<i>BroadWorks Release 13 Bulletin</i>	December 2006	Cisco-VoIP Pal00004878
			<i>Basic Call Processing: Feature Specification Document, Release 2.0 (Feb. 2000)</i>	February 2000	Cisco-VoIP Pal00004874
			<i>Product Overview Guide Release 13 ("Product Overview 13")</i>	2007	Cisco-VoIP Pal00004877
			<i>BroadWorks Feature Overview (through Release 13.0) ("Feature Overview 13")</i>	November 2006	Cisco-VoIP Pal00004873
			<i>BroadWorks Feature Overview (through Release 12) ("Feature Overview 12")</i>	March 2005	Cisco-VoIP Pal00000823
A-9, B-9	Sylantr o	2006	<i>Sylantro Synergy Administrator's Guide Software Version 4.0</i>	March 31, 2006	Cisco-VoIP Pal00001178
Intentionally	Altigen Comm	3/1999	This system is the subject of		

TABLE 1					
Exhibit No.	Name of System	Publicly known, in use, on sale, or sold in the U.S. at least by	Exemplary Publications Describing the System	Publication Date	Production Number
left blank	unications Inc.		ongoing investigation and/or discovery of third-party information. Publications and other documents related to this system will be produced in due course as investigation and/or discovery proceeds.		
			<i>Data Communications: The Global Magazine for Network Architects</i> , March 1999	3/1999	DEFCOMM ON00057097
Intentionally left blank	StarVox, Inc.	1/25/2001	This system is the subject of ongoing investigation and/or discovery of third-party information. Publications and other documents related to this system will be produced in due course as investigation		

TABLE 1					
Exhibit No.	Name of System	Publicly known, in use, on sale, or sold in the U.S. at least by	Exemplary Publications Describing the System	Publication Date	Production Number
			and/or discovery proceeds.		
			WO2001006740 (“Duffy”)	1/25/2001	DEFCOMM ON00021112
A-10, B-10	Interactive Intelligence Systems	1998	US 6,449,353 B1 (“Hynes, Jr.”)	9/10/2002	DEFCOMM ON00053277
			US 6,718,032 B1 (“Vrenjak”)	3/6/2004	DEFCOMM ON00053293
			US 6,804,346 B1 (“Mewhinney”)	10/12/2004	DEFCOMM ON00053300
			US 6,944,272 B1 (“Thomas”)	9/13/2005	DEFCOMM ON00053312
			US 7,110,523 B2 (“Gagle”)	9/19/2006	DEFCOMM ON00053328
			US 2005/0135401A1 (“Schmidt”)	6/23/2005	DEFCOMM ON00053338
			Microsoft-based IP PBX Communications Solution, Enterprise Interaction Center	2004	DEFCOMM ON00053163
			IP Telephony and EIC: A Technical Overview	7/22/1998	DEFCOMM ON00053239
			IP Telephony and the Interaction Center Platform, White Paper	9/25/2003	DEFCOMM ON00053248

TABLE 1					
Exhibit No.	Name of System	Publicly known, in use, on sale, or sold in the U.S. at least by	Exemplary Publications Describing the System	Publication Date	Production Number
			Unified Communications Using Communiqué	5/1/2002	DEFCOMM ON00053139
			Interaction SIP Proxy	2/2004	DEFCOMM ON00053237
			Interaction Director Technical Overview	2003	DEFCOMM ON00053202
			The Interaction Center Platform White Paper	2/18/2003	DEFCOMM ON00053167
Intentionally left blank	Popstar Global Communications	4/3/2003	This system is the subject of ongoing investigation and/or discovery of third-party information. Publications and other documents related to this system will be produced in due course as investigation and/or discovery proceeds.		
			WO2003028355 (“Brongo”)	4/3/2003	DEFCOMM ON00021232
A-11, B-11		June 2005	IPR2016-01201, Ex. 2016 Decl. of Mangione-Smith	Declaration Signed 2/10/2017	DEFCOMM ON00034658

TABLE 1					
Exhibit No.	Name of System	Publicly known, in use, on sale, or sold in the U.S. at least by	Exemplary Publications Describing the System	Publication Date	Production Number
	Digifonica ²		IPR2016-01201, Ex. 2014 RBR Source Code Version 361	6/6/2005	DEFCOMM ON00034557
			IPR2016-01201, Ex. 2003 Technical Review of Digifonica VoIP System	5/7/2005	DEFCOMM ON00034480
			IPR2016-01201, Ex.2020 Next Generation Networks – A Migration Path Digifonica Voice Over IP Technologies	6/3/2005	DEFCOMM ON00034757
			IPR2016-01201, Ex.2018 Decl. of Terry	Declaration Signed 2/8/17	DEFCOMM ON00034744
			IPR2016-01201, Ex.2013 Decl. of Perreault	Declaration Signed 2/8/2017	DEFCOMM ON00034551
			IPR2016-01201, Ex.2012 Decl. of Bjorsell	Declaration Signed 2/9/2017	DEFCOMM ON00034542

² VoIP-Pal has stated in responses to discovery requests that it intends to prove a date of conception of January 31, 2005 and a reduction to practice by June 6, 2005. VoIP-Pal has asserted that Digifonica reduced to practice the claimed functionality by June 2005. *See* IPR2016-01198, Ex. 2016, Decl. of Mangione-Smith, ¶¶ 25-29, Decl. of IPR2016-01201, Ex. 2016, Decl. of Mangione-Smith, ¶¶ 25-29. On information and belief, this system was on sale or in public use in the United States before November 2, 2005. Defendants' investigation into this system is ongoing and Defendants expressly reserve the right to supplement their contentions as Defendants' investigation progresses.

TABLE 1					
Exhibit No.	Name of System	Publicly known, in use, on sale, or sold in the U.S. at least by	Exemplary Publications Describing the System	Publication Date	Production Number
			IPR2016-01198, Ex. 2016 Decl. of Mangione-Smith	Declaration Signed 2/10/2017	DEFCOMM ON00030381
			IPR2016-01198, Ex. 2014 RBR Source Code Version 361	6/6/2005	DEFCOMM ON00030280
			IPR2016-01198, Ex. 2003 Technical Review of Digifonica VoIP System	5/7/2005	DEFCOMM ON00030203
			IPR2016-01198, Ex.2020 Next Generation Networks – A Migration Path Digifonica Voice Over IP Technologies	6/3/2005	DEFCOMM ON00030494
			IPR2016-01198, Ex.2018 Decl. of Terry	Declaration Signed 2/8/17	DEFCOMM ON00030481
			IPR2016-01198, Ex.2013 Decl. of Perreault	Declaration Signed 2/8/2017	DEFCOMM ON00030274
			IPR2016-01198, Ex.2012 Decl. of Bjorsell	Declaration Signed 2/9/2017	DEFCOMM ON00030265
A-12, B-12		2004	ACS VoIP 2004.11 Advanced Feature	September 17, 2004	ATT00003425

TABLE 1					
Exhibit No.	Name of System	Publicly known, in use, on sale, or sold in the U.S. at least by	Exemplary Publications Describing the System	Publication Date	Production Number
A-13, B-13	MCI Systems ⁴	November 21, 2002	Platform (“ACS VoIP”)		
			AT&T VoIP R2 User Guide (“R2 User Guide”)	November 13, 2003	ATT00005481
			IP Communications Overview Presentation, MCI Network Development Engineering	2002	DEFCOMM ON00053522
			Call Flows for IP Communications Phase 4a, Greg Paterno, Worldcom Network Development Engineering	8/29/2001	DEFCOMM ON00053374
			WorldCom Gen-D SIP Server Overview for Home Depot Presentation, Diana Rawlins	1/2002	DEFCOMM ON00053862

³ On information and belief, AT&T created a system known as CallVantage that implemented the claimed functionality. *See* ATT00003425; ATT00005481. Defendants’ investigation into this system is ongoing and Defendants expressly reserve the right to supplement its contentions as Defendants’ investigation progresses.

⁴ On information and belief, MCI and Verizon created a system known as IP Communications, Worldcom Connection and MCI Advantage that implemented the claimed functionality. *See* DEFCOMMON00053347-3883. Defendants’ investigation into this system is ongoing and Defendants expressly reserve the right to supplement its contentions as Defendants’ investigation progresses.

TABLE 1					
Exhibit No.	Name of System	Publicly known, in use, on sale, or sold in the U.S. at least by	Exemplary Publications Describing the System	Publication Date	Production Number
			Emerging Network Solutions Development		
			McMurry, Kathleen and Gregorat, Mariafranca, Redirect Server Invite Logic Requirements, Release 4.8.2	11/21/2002	DEFCOMM ON00053610
			McMurry, Kathleen and Gregorat, Mariafranca, Redirect Server Invite Logic Requirements, Release 5.0 (rev 20)	7/1/2003	DEFCOMM ON00053643
			Gregorat, Mariafranca, Redirect Server Invite Logic Requirements, Release 5.7 (rev 4)	8/18/2005	DEFCOMM ON00053791
			SIP Beyond VoIP – The Next Step in the IP Communications Revolution, Sinnreich, Henry <i>et al.</i> , VON	July 2005	DEFCOMM ON00053368

TABLE 1					
Exhibit No.	Name of System	Publicly known, in use, on sale, or sold in the U.S. at least by	Exemplary Publications Describing the System	Publication Date	Production Number
			Publishing, New York, New York		
			Email from Douglas Smith to Lance Lockhart et al., RS 5.0.1 FVO – Status Update	7/17/2003	DEFCOMM ON00053347
			Email from Douglas Smith to Lance Lockhart et al., RS 5.0.1 Rollout – Status Update	7/18/2003	DEFCOMM ON00053367
			MCI Advantage FAQ, MCI, http://business.mci.com/small_business/local_long_distance/mci_advantage_faq.jsp , accessed through Internet Archive https://web.archive.org/web/20040605210459/http://business.mci.com/small_business/local_long_distance/mci_advantage_faq.jsp (“MCI Advantage FAQ”)	6/5/2004	DEFCOMM ON00053362

b. Patents and Patent Applications

TABLE 2						
Exhibit No.	Abbreviated Name	Patent or Publication No.	Country of Origin	Filing Date	Date of Issue or Publication	Production Number
A-14, B-14	Silverman	5,875,240	United States	2/21/1997	2/23/1999	DEFCO MMON0014939
A-15, B-15	Farah	7,916,846	United States	8/31/2005	3/29/2011	DEFCO MMON0018877
A-16, B-16	Mermel	7,016,343	United States	12/28/2001	3/21/2006	DEFCO MMON0017612
A-17, B-17	Smyk ⁵	6,597,686	United States	4/21/1998	7/22/2003	DEFCO MMON0015744
A-18, B-18	Fellingham ⁶	6,292,553	United States	5/20/1998	9/18/2001	DEFCO MMON0015244
A-19, B-19	Seligmann	WO03/096559	United States	5/6/2003	11/20/2003	DEFCO MMON00021251
A-20, B-20	Fisher	2004/0218748	United States	12/23/2003	11/4/2004	DEFCO MMON00014725
A-21, B-21	Mak	2002/0116464	United States	3/27/2001	8/22/2002	DEFCO MMON00019352

⁵ On information and belief, Telcordia created a system implementing the functionality described in Smyk (U.S. Pat. No. 6,597,686). Defendants expressly reserve the right to rely on any potential Telcordia system art as an alternative and/or different reference from Smyk (U.S. Pat. No. 6,597,686).

⁶ On information and belief, AT&T created a system implementing the functionality described in Fellingham (U.S. Pat. No. 6,292,553). *See* DEFCOMMON00015244. Defendants expressly reserve the right to rely on any potential AT&T system art as an alternative and/or different reference from Fellingham (U.S. Pat. No. 6,292,553).

TABLE 2						
Exhibit No.	Abbreviated Name	Patent or Publication No.	Country of Origin	Filing Date	Date of Issue or Publication	Production Number
A-22, B-22	Alfke	7,765,263	United States	12/19/2003	7/27/2010	DEFCO MMON0018753
A-23, B-23	Alfke '136	7,836,136	United States	7/31/2006	11/16/2010	DEFCO MMON0018840
A-24, B-24	Chu	7,486,684	United States	9/30/2003	2/3/2009	DEFCO MMON0018485
A-25, B-25	Veschi	2001/0028642	United States	2/29/2001	11/11/2001	DEFCO MMON0019209
A-26, B-26	Nadeau	6,240,449	United States	11/2/1998	5/29/2001	DEFCO MMON0015139
A-27, B-27	Jadoul	EP 1 054 569	France	5/19/1999	11/22/2000	DEFCO MMON0008596
A-28, B-28	Duffy	WO2001006740	United States	7/14/2000	1/25/2001	DEFCO MMON00021112
A-29, B-29	Abelev	WO2004102941	United States	3/19/2004	11/25/2004	DEFCO MMON00020585
A-30, B-30	Kaczmarczyk	6,775,269	United States	3/29/2000	8/10/2004	DEFCO MMON00017370
A-31, B-31	Gregorat	2007/0061397	United States	7/28/2006	3/15/2007	DEFCO MMON00020359
A-32, B-32	Pearce	7,359,368	United States	5/25/2000	4/15/2008	DEFCO MMON00018361

TABLE 2						
Exhibit No.	Abbreviated Name	Patent or Publication No.	Country of Origin	Filing Date	Date of Issue or Publication	Production Number
A-33, A-33	Chinni	6,205,135	United States	3/6/1997	3/20/2001	DEFCO MMON0 0015112
A-34, B-34	Al Hakim ⁷	6,954,455	United States	4/2/2001	10/11/2005	DEFCO MMON0 0017556
A-35, B-35	Voit ⁸	6,870,827	United States	3/19/1997	3/22/2005	DEFCO MMON0 0018779
A-36, B-36	Billinger	4,799,255	United States	1/30/1987	1/17/1989	DEFCO MMON0 0014827
A-37, B-37	Dunn	6,324,280	United States	5/5/1998	11/27/2001	DEFCO MMON0 0015285
A-38, B-38	Beckstrom	6,608,831	United States	11/15/1999	8/19/2003	DEFCO MMON0 0015760
A-39, B-39	Cope	7,616,753	United States	5/3/2004	11/10/2009	DEFCO MMON0 0018695
A-40, B-40	Elliott	6,754,181	United States	11/18/1996	6/22/2004	DEFCO MMON0 0016512

⁷ On information and belief, AT&T created a system implementing the functionality described in Al Hakim (U.S. Pat. No. 6,954,455). Defendants expressly reserve the right to rely on any potential AT&T system art as an alternative and/or different reference from Al Hakim (U.S. Pat. No. 6,954,455).

⁸ On information and belief, Verizon created a system implementing the functionality described in Voit (U.S. Pat. No. 6,870,827). Defendants expressly reserve the right to rely on any potential Verizon system art as an alternative and/or different reference from Voit (U.S. Pat. No. 6,870,827).

TABLE 2

Exhibit No.	Abbreviated Name	Patent or Publication No.	Country of Origin	Filing Date	Date of Issue or Publication	Production Number
A-41, B-41	Brongo	WO2003 028355	Canada	9/24/2001	4/3/2003	DEFCO MMON0 0021232
A-42, B-42	Duffy II	WO2000 69156	United States	5/12/2000	11/16/2000	DEFCO MMON0 0021023
A-43, B-43	Pickett	6,498,791	United States	5/4/2001	12/24/2002	DEFCO MMON0 0015433
A-44, B-44	Bales '974	4,661,974	United States	4/13/1984	4/28/1987	DEFCO MMON0 0014783
A-45, B-45	Olivier	6,480,885	United States	4/5/2000	11/12/2002	DEFCO MMON0 0015392

c. Non-Patent Literature

TABLE 3

Exhibit No.	Title	Date of Publication	Author	Publisher	Production Number
A-46, B-46	Session Initiation Protocol (RFC 3261)	6/2002	J. Rosenberg et al.	The Internet Society	DEFCOMM ON00010431
A-47, B-47	An Architecture for Residential Internet Telephony Service	1999	Christian Huitema et al.	IEEE Network	DEFCOMM ON00000374
A-48, B-48	Cisco CallManager	2001	Alexander et al.	Cisco Press	DEFCOMM ON00057483

TABLE 3

Exhibit No.	Title	Date of Publication	Author	Publisher	Production Number
	Fundamentals 1st ed.				
A-49, B-49	TOPS: An Architecture of Telephony over Packet Networks	1/1999	Anerousis et al.	IEEE	DEFCOMM ON00011774
A-5, B-5	Tenor Call Routing	6/10/2005	Quintum Technologies, Inc.	Quintum Technologies, Inc.	DEFCOMM ON00056270

If, and to the extent, VoIP-Pal challenges the correspondence of any of these references with respect to particular limitations of the Asserted Claims of the Asserted Patents, Defendants reserve the right to supplement these invalidity contentions to identify additional combinations, motivations to modify, or explanations for particular references with additional particularity.

Defendant also reserves the right to supplement these obviousness positions (including the actual prior art combinations and the associated reasons to combine) as discovery in the case progresses, including expert discovery. Additionally, Defendants believe that certain non-parties and current or former employees thereof may have possession of relevant information and/or documents constituting prior art to the Asserted Patents. Defendants are continuing its investigation into these and other companies and their products. Defendants reserve the right to supplement these Initial Invalidity Contentions to identify additional references, combinations, motivations to modify, or explanations for particular references based on any information and/or documents provided by the former employees and/or successors-in-interests of companies or individuals who may possess relevant information and/or documents constituting prior art to the Asserted Patents.

Defendant further identifies the following prior art references that, in combination with one or more of the above references, renders the Asserted Claims obvious or that indicates the general knowledge within the relevant art at the time of the alleged inventions. Defendant re-

serves the right to rely on any one of these references for purposes of establishing the obviousness of any claim limitation and/or the knowledge possessed by a person of ordinary skill in the art.

TABLE 4			
Reference No.	Name of Reference	35 U.S.C. 103	Production Number
S1	AT&T Definity Comms.	in combination with one or more of primary references identified in Tables 1 through 3	DEFCOMMON00000382
S2	Avaya Comms. Mgr.	in combination with one or more of primary references identified in Tables 1 through 3	DEFCOMMON00042080
S3	Bellcore SS7	in combination with one or more of primary references identified in Tables 1 through 3	DEFCOMMON00004818
S4	Carey (U.S. Pat. No. 6,714,793)	in combination with one or more of primary references identified in Tables 1 through 3	DEFCOMMON00016389
S5	CISCO IP TELEPHONY GUIDE	in combination with one or more of primary references identified in Tables 1 through 3	DEFCOMMON00008286
S6	CISCO CALLMANAGER BEST PRACTICES	in combination with one or more of primary references identified in Tables 1 through 3	DEFCOMMON00022205; DEFCOMMON00045486
S7	CONFIGURING CALLMANAGER AND UNITY: A STEP-BY-STEP GUIDE	in combination with one or more of primary references identified in Tables 1 through 3	DEFCOMMON00049303
S8	Farris (U.S. Pat. No. 6,122,357)	in combination with one or more of primary references identified in Tables 1 through 3	DEFCOMMON00015037

TABLE 4			
Reference No.	Name of Reference	35 U.S.C. 103	Production Number
S9	Hodges et al. (U.S. Pat. No. 6,707,901)	in combination with one or more of primary references identified in Tables 1 through 3	DEFCOMMON00016375
S10	IN Seminar Introduction	in combination with one or more of primary references identified in Tables 1 through 3	DEFCOMMON00008778
S11	ITU-T H.248.1	in combination with one or more of primary references identified in Tables 1 through 3	DEFCOMMON00012921
S12	ITU-T H.323	in combination with one or more of primary references identified in Tables 1 through 3	DEFCOMMON00013071
S13	Lee (U.S. Pat. No. 5,937,053)	in combination with one or more of primary references identified in Tables 1 through 3	DEFCOMMON00014969
S14	Ranganathan et al.	in combination with one or more of primary references identified in Tables 1 through 3	DEFCOMMON00009732
S15	RFC 791	in combination with one or more of primary references identified in Tables 1 through 3	DEFCOMMON00009749
S16	RFC 793	in combination with one or more of primary references identified in Tables 1 through 3	DEFCOMMON00009801
S17	RFC 768	in combination with one or more of primary references identified in Tables 1 through 3	DEFCOMMON00009746
S18	RFC 950	in combination with one or more of primary references	DEFCOMMON00010052

TABLE 4			
Reference No.	Name of Reference	35 U.S.C. 103	Production Number
		identified in Tables 1 through 3	
S19	RFC 1034	in combination with one or more of primary references identified in Tables 1 through 3	DEFCOMMON00010070
S20	RFC 1035	in combination with one or more of primary references identified in Tables 1 through 3	DEFCOMMON00010125
S21	RFC 1889	in combination with one or more of primary references identified in Tables 1 through 3	DEFCOMMON00010180
S22	RFC 2916	in combination with one or more of primary references identified in Tables 1 through 3	DEFCOMMON00010287
S23	RFC 2960	in combination with one or more of primary references identified in Tables 1 through 3	DEFCOMMON00010297
S24	RFC 3332	in combination with one or more of primary references identified in Tables 1 through 3	DEFCOMMON00010700
S25	RFC 3398	in combination with one or more of primary references identified in Tables 1 through 3	DEFCOMMON00010820
S26	RFC 3435	in combination with one or more of primary references identified in Tables 1 through 3	DEFCOMMON00010888
S27	RFC 1035	in combination with one or more of primary references	DEFCOMMON00010125

TABLE 4			
Reference No.	Name of Reference	35 U.S.C. 103	Production Number
		identified in Tables 1 through 3	
S28	RFC 3666	in combination with one or more of primary references identified in Tables 1 through 3	DEFCOMMON00011128
S29	RFC 3761	in combination with one or more of primary references identified in Tables 1 through 3	DEFCOMMON00011246
S30	RFC 3398	in combination with one or more of primary references identified in Tables 1 through 3	DEFCOMMON00010820
S31	Scott (U.S. Pat. No. 6,760,324)	in combination with one or more of primary references identified in Tables 1 through 3	DEFCOMMON00017305
S32	Tutorial on Signaling System 7 (SS7)	in combination with one or more of primary references identified in Tables 1 through 3	DEFCOMMON00011745
S33	Thornton (U.S. Pat. No. 6,363,065)	in combination with one or more of primary references identified in Tables 1 through 3	DEFCOMMON00015317
S34	Voit (U.S. Pat. No. 6,289,010) (“Voit ’010”)	in combination with one or more of primary references identified in Tables 1 through 3	DEFCOMMON00015183
S35	“What is ENUM?” (Network World)	in combination with one or more of primary references identified in Tables 1 through 3	DEFCOMMON00020580
S36	Wheeler (U.S. Pat. No. 5,572,583)	in combination with one or more of primary references identified in Tables 1 through 3	DEFCOMMON00014893

TABLE 4			
Reference No.	Name of Reference	35 U.S.C. 103	Production Number
S37	Zbib (U.S. Pat. Pub. No. 2002/0101974)	in combination with one or more of primary references identified in Tables 1 through 3	DEFCOMMON00019344
S38	System Description for the Cisco Communications Network	in combination with one or more of primary references identified in Tables 1 through 3	DEFCOMMON00050756
S39	White (U.S. Pat. 6,069,890)	in combination with one or more of primary references identified in Tables 1 through 3	DEFCOMMON00015016
S40	SIP Beyond VoIP – The Next Step in the IP Communications Revolution, Sinnreich, Henry <i>et al.</i> , VON Publishing, New York, New York, July 2005	in combination with one or more of primary references identified in Tables 1 through 3	DEFCOMMON00053368
S41	Winsor (U.S. Pub. No. 2005/0164704 A1)	in combination with one or more of primary references identified in Tables 1 through 3	DEFCOMMON00019903
S42	Chang (U.S. Pub. No. 2003/0095541 A1)	in combination with one or more of primary references identified in Tables 1 through 3	DEFCOMMON00019562
S43	ITU-T H.225	in combination with one or more of primary references identified in Tables 1 through 3	DEFCOMMON00011850
S44	ITU-T H.245	in combination with one or more of primary references identified in Tables 1 through 3	DEFCOMMON00012289

TABLE 4			
Reference No.	Name of Reference	35 U.S.C. 103	Production Number
S45	ITU-T X.500	in combination with one or more of primary references identified in Tables 1 through 3	DEFCOMMON00013755
S46	Cisco Gatekeeper External Interface Reference, Version 3, July 2001	in combination with one or more of primary references identified in Tables 1 through 3	DEFCOMMON00045659
S47	Enhanced Gatekeeper Solutions Using GKTMP/API	in combination with one or more of primary references identified in Tables 1 through 3	DEFCOMMON00008695
S48	RFC 821	in combination with one or more of primary references identified in Tables 1 through 3	DEFCOMMON00009982
S49	RFC 3482	in combination with one or more of primary references identified in Tables 1 through 3	DEFCOMMON00011098
S50	Meubus (U.S. Patent No. 6,185,565)	in combination with one or more of primary references identified in Tables 1 through 3	DEFCOMMON00015088
S51	Koch (U.S. Pat. 7,412,049)	in combination with one or more of primary references identified in Tables 1 through 3	DEFCOMMON00058225
S52	Choupak (U.S. Pat. 7,346,156)	in combination with one or more of primary references identified in Tables 1 through 3	DEFCOMMON00058212
S53	Hinchey (U.S. Pub. No. 2002/0122547)	in combination with one or more of primary references identified in Tables 1 through 3	DEFCOMMON00019375

4. Invalidity Of The Asserted Patents Based On 35 U.S.C. § 112 For Lack Of Written Description And Enablement

The specification of the Asserted Patents do not provide adequate written description to support the scope of the claims asserted by VoIP-Pal in furtherance of its infringement theories or any reasonably understood scope of the claims.⁹ 35 U.S.C. § 112 ¶ 1¹⁰ requires the specification to contain “a written description of the invention.” To fulfill the written description requirement, the specification “must clearly allow persons of ordinary skill in the art to recognize that the inventor invented what is claimed.” *Ariad Pharm., Inc. v. Eli Lilly & Co.*, 598 F.3d 1336, 1351 (Fed. Cir. 2010) (citation omitted). To satisfy the written description requirement, “the applicant must ‘convey with reasonable clarity to those skilled in the art that, as of the filing date sought, he or she was in possession of the invention,’ and demonstrate that by disclosure in the specification of the patent.” *Carnegie Mellon Univ. v. Hoffmann-La Roche Inc.*, 541 F.3d 1115, 1122 (Fed. Cir. 2008) (quoting *Vas-Cath Inc. v. Mahurkar*, 935 F.2d 1555, 1563-64 (Fed. Cir. 1991)). The Asserted Patents do not meet that requirement.¹¹

Additionally, the Asserted Patents do not enable the claim scope contended in VoIP-Pal’s Infringement Contentions.¹² Title 35 U.S.C. § 112 ¶ 1 requires the specification to describe “the manner and process of making and using [the invention], in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains ... to make and use the [invention].” The enablement requirement is separate from and in addition to the written description requirement. *Ariad*, 598 F.3d at 1344. This “requirement is satisfied when one skilled in the art, after reading the specification, could practice the claimed invention without undue experimentation.” *AK Steel Corp. v. Sollac & Ugine*, 344 F.3d 1234, 1244 (Fed. Cir.

⁹ This is also true of the original application(s) that gave rise to the Asserted Patents. For ease of reference, Defendants refer only to the issued specification.

¹⁰ Because the original applications that gave rise to the Asserted Patents was filed prior to September 16, 2012, Defendants apply pre-AIA 35 U.S.C. § 112 ¶ 1 here. However, to the extent that any other form of the patent statute (e.g., post-AIA) regarding invalidity for indefiniteness, non-enablement, or lack of written description applies, Defendants’ contentions and analysis apply just the same.

¹¹ Nor does any provisional application to which the Asserted Patents claim priority meet either of the enablement or written description requirements.

¹² This is also true of the original application(s) that gave rise to the Asserted Patents. For ease of reference, Defendants refer only to the issued specification.

2003) (citation omitted); *see Wyeth & Cordis Corp. v. Abbott Laboratories*, 720 F.3d 1380 (Fed. Cir. 2013). The Asserted Patents do not meet that requirement.

The Asserted Claims fail to satisfy the written description and enablement requirements due to at least the following claim language or limitations:

a. Both Asserted Patents

- “call routing controller,” “call routing apparatus,” “call routing controller apparatus”;
 - Renders invalid asserted ’815 claims 1, 7, 12, 27, 28, 72, 73, 92, and 111; and ’005 claims 49 and 73.
 - If these preamble terms are found to be substantive limitations, the ’815 and ’005 Patents do not demonstrate possession of, or enable skilled artisans to practice the “call routing controller,” “call routing apparatus,” “call routing controller apparatus” limitations, including in view of VoIP-Pal’s infringement claims and contentions. Neither the claims nor the specifications define a “call routing controller,” “call routing apparatus,” or “call routing controller apparatus,” or explains what these items are as distinct from the call controller and routing controller.
- “public network”;
 - Renders invalid asserted ’815 claims 1, 7, 12, 27, 28, 72, 73, 92, and 111; and ’005 claims 49 and 73.
 - The ’815 and ’005 Patents do not demonstrate possession of, or enable skilled artisans to practice the “public network” limitation, including in view of VoIP-Pal’s infringement claims and contentions. Neither the claims nor the specifications define a public network, or provide what qualities a network must have in order to be “public.”
- “private network”;
 - Renders invalid asserted ’815 claims 1, 7, 12, 27, 28, 72, 73, 92, and 111; and ’005 claims 49 and 73.

- The '815 and '005 Patents do not demonstrate possession of, or enable skilled artisans to practice the “private network” limitation, including in view of VoIP-Pal’s infringement claims and contentions. Neither the claims nor the specifications define a private network, or provide what qualities a network must have in order to be “private.”
- “public network classification criterion[/criteria]”;
 - Renders invalid asserted '815 claims 1, 7, 12, 27, 28, 72, 73, 92, and 111; and '005 claims 49 and 73.
 - The '815 and '005 Patents do not demonstrate possession of, or enable skilled artisans to practice the “public network classification criterion” limitation, including in view of VoIP-Pal’s infringement claims and contentions. Neither the claims nor the specifications explain or define what the criterion or criteria are e.g., what criteria correlate with the public network.
- “private network classification criterion”;
 - Renders invalid asserted '815 claims 1, 7, 12, 27, 28, 72, 73, 92, and 111; and '005 claims 49 and 73.
 - The '815 and '005 Patents do not demonstrate possession of, or enable skilled artisans to practice the “private network classification criterion” limitation, including in view of VoIP-Pal’s infringement claims and contentions. Neither the claims nor the specifications explain or define what the criterion or criteria are e.g., what criteria correlate with the private network.
- “means for causing the private network routing message or the public network routing message to be communicated to a call controller to effect routing of the call.”
 - Renders invalid asserted '815 claim 111 and '005 claim 73.
 - The '815 and '005 Patents do not demonstrate possession of, or enable skilled artisans to practice, causing the private network routing message or the public network routing message to be communicated to a call controller to effect routing of the call because the specification does not provide an adequate structure or

algorithm to describe or enable the limitation, including in view of VoIP-Pal's infringement claims and contentions.

b. '815 Patent

- “determining a match when at least one of said calling attributes matches at least a portion of said callee identifier”;
 - Renders invalid asserted '815 claims 1, 7, 12, 27.
 - The '815 Patent does not demonstrate possession of, or enable skilled artisans to “determin[e] a match when at least one of said calling attributes matches at least a portion of said callee identifier,” including in view of VoIP-Pal's infringement claims and contentions. The patent does not provide how to compare a calling attribute to a callee identifier, in what way the calling attribute and callee identifier need to match, or what “portion” of the callee identifier and calling attribute must match to be considered a match.
- “means for determining a match when at least one of said calling attributes matches at least a portion of said callee identifier”;
 - Renders invalid asserted '815 claim 28.
 - The '815 Patent does not demonstrate possession of, or enable skilled artisans to practice “means for determining a match when at least one of said calling attributes matches at least a portion of said callee identifier,” including in view of VoIP-Pal's infringement claims and contentions. The patent does not provide how to compare a calling attribute to a callee identifier, in what way the calling attribute and callee identifier need to match, or what “portion” of the callee identifier and calling attribute must match to be considered a match.
- “classifying said call as a private network call when said reformatted callee identifier identifies a subscriber to the private network”;
 - Renders invalid asserted '815 claim 12.

- The '815 Patent does not demonstrate possession of, or enable skilled artisans to practice “classifying said call as a private network call when said reformatted callee identifier identifies a subscriber to the private network,” including in view of VoIP-Pal’s infringement claims and contentions. The patent does not describe how the reformatted callee identifier identifies a subscriber to the private network.

c. '005 Patent

- “first network”;
 - Renders invalid asserted '005 claims 74, 75, 77, 78, 83, 84, 94, 96, and 99.
 - The '005 Patent does not demonstrate possession of, or enable skilled artisans to practice the “first network” limitation, including in view of VoIP-Pal’s infringement claims and contentions. Neither the claims nor the specification define a first network, or provide what qualities a network must have in order to be a “first” network.
- “second network”;
 - Renders invalid asserted '005 claims 74, 75, 77, 78, 83, 84, 94, 96, and 99.
 - The '005 Patent does not demonstrate possession of, or enable skilled artisans to practice the “second network” limitation, including in view of VoIP-Pal’s infringement claims and contentions. Neither the claims nor the specification define a second network, or provide what qualities a network must have in order to be a “second” network.
- “first network classification criterion”;
 - Renders invalid asserted '005 claims 74, 75, 77, 78, 83, 84, 94, 96, and 99.
 - The '005 Patent does not demonstrate possession of, or enable skilled artisans to practice the “first network classification criterion” limitation, including in view of VoIP-Pal’s infringement claims and contentions. Neither the claims nor the specification explain or define what the criterion or criteria are – e.g., what criteria correlate with the first network.

- 1 • “second network classification criterion”;
 - 2 ○ Renders invalid asserted ’005 claims 74, 75, 77, 78, 83, 84, 94, 96, and 99.
 - 3 ○ The ’005 Patent does not demonstrate possession of, or enable skilled artisans to
 - 4 practice the “second network classification criterion” limitation, including in view
 - 5 of VoIP-Pal’s infringement claims and contentions. Neither the claims nor the
 - 6 specification explain or define what the criterion or criteria are – e.g., what criteria
 - 7 correlate with the second network.
- 8 • “first portion”;
 - 9 ○ Renders invalid asserted ’005 claims 74, 75, 77, 78, 83, 84, 94, 96, and 99.
 - 10 ○ The ’005 Patent does not demonstrate possession of, or enable skilled artisans to
 - 11 practice the limitation regarding the “first portion” of the packet switched
 - 12 network, including in view of VoIP-Pal’s infringement claims and contentions.
 - 13 The patent does not provide any description of what constitutes or defines a first
 - 14 portion of the packet switched network, or what qualities or capabilities it has.
- 15 • “second portion”;
 - 16 ○ Renders invalid asserted ’005 claims 74, 75, 77, 78, 83, 84, 94, 96, and 99.
 - 17 ○ The ’005 Patent does not demonstrate possession of, or enable skilled artisans to
 - 18 practice the limitation regarding the “second portion” of the packet switched
 - 19 network, including in view of VoIP-Pal’s infringement claims and contentions.
 - 20 The patent does not provide any description of what constitutes or defines a
 - 21 second portion of the packet switched network, or what qualities or capabilities it
 - 22 has.
- 23 • “entity”; and
 - 24 ○ Renders invalid asserted ’005 claims 74, 75, 77, 78, 83, 84, 94, 96, and 99.
 - 25 ○ The ’005 Patent does not demonstrate possession of, or enable skilled artisans to
 - 26 practice the “entity” limitation, including in view of VoIP-Pal’s infringement
 - 27 claims and contentions. The asserted claims only provides that an “entity”
 - 28 controls a first or second portion of a packet switched network, but the patent does

not provide any definition for or qualities of what constitutes such an entity, or how the entity controls the first or second portion of the packet switched network.

- “means for using a caller identifier associated with the caller to locate a caller dialing profile comprising a plurality of calling attributes associated with the caller.”
 - Renders invalid asserted ’005 claim 73.
 - The ’005 Patent does not demonstrate possession of, or enable skilled artisans to practice “means for using a caller identifier associated with the caller to locate a caller dialing profile comprising a plurality of calling attributes associated with the caller,” including in view of VoIP-Pal’s infringement claims and contentions. The patent does not describe how the caller dialing profile is located using a caller identifier, or which calling attributes comprise the caller dialing profile.

Defendants reserve the right to amend this list.

5. Invalidity Of The Asserted Patents Based On 35 U.S.C. § 112 For Indefiniteness.

The Asserted Claims of the Asserted Patents are invalid for failing to comply with the definiteness requirement of 35 U.S.C. § 112. Defendants note that Defendants’ charting of a prior art reference for a claim or limitation that Defendants contend is invalid for lack of definiteness in no way represents an admission or concession that the scope of the claim or limitation is definite or ascertainable.

Title 35 U.S.C. § 112 ¶ 2 requires that a patent claim “particularly point[] out and distinctly claim[] the subject matter which the applicant regards as his invention.” Claim terms that fail to inform those skilled in the art “with reasonable certainty . . . about the scope of the invention” fail the definiteness requirement of § 112 ¶ 2. *Nautilus, Inc. v. Biosig Instruments, Inc.*, 134 S. Ct. 2120, 2124 (2014).

All Asserted Claims are invalid as indefinite because, at a minimum, the limitations identified in this section, read in light of the intrinsic evidence, fail to inform those skilled in the art with reasonable certainty about the scope of the claimed inventions:

a. Both Asserted Patents

- “call routing controller,” “call routing apparatus,” “call routing controller apparatus”;
 - Renders invalid asserted ’815 claims 1, 7, 12, 27, 28, 72, 73, 92, and 111; and ’005 claims 49 and 73.
 - If these preamble terms are found to be substantive limitations, the ’815 and ’005 Patents fail to inform those skilled in the art with reasonable certainty about the scope of the terms “call routing controller,” “call routing apparatus,” “call routing controller apparatus” including in view of VoIP-Pal’s infringement claims and contentions. Neither the claims nor the specifications explain what that these terms mean or what these items are as distinct from the call controller and routing controller.
- “public network”;
 - Renders invalid asserted ’815 claims 1, 7, 12, 27, 28, 72, 73, 92, and 111; and ’005 claims 49 and 73.
 - The ’815 and ’005 Patents fail to inform those skilled in the art with reasonable certainty about the scope of the term “public network,” including in view of VoIP-Pal’s infringement claims and contentions. Neither the claims nor the specifications explain what that term means – e.g., what qualities a network must have in order to fall within the meaning of “public” in the claims.
- “private network”;
 - Renders invalid asserted ’815 claims 1, 7, 12, 27, 28, 72, 73, 92, and 111; and ’005 claims 49 and 73.
 - The ’815 and ’005 Patents fail to inform those skilled in the art with reasonable certainty about the scope of the term “private network,” including in view of VoIP-Pal’s infringement claims and contentions. Neither the claims nor the specifications explain what that term means e.g., what qualities a network must have in order to fall within the meaning of “private” in the claims.

- 1 • “public network classification criterion”;
 - 2 ○ Renders invalid asserted ’815 claims 1, 7, 12, 27, 28, 72, 73, 92, and 111; and
 - 3 ○ ’005 claims 49 and 73.
 - 4 ○ The ’815 and ’005 Patents fail to inform those skilled in the art with reasonable
 - 5 certainty about the scope of the term “public network classification criterion,”
 - 6 including in view of VoIP-Pal’s infringement claims and contentions. Neither the
 - 7 claims nor the specifications explain what the criterion or criteria are e.g., what
 - 8 criteria correlate with the public network.
- 9 • “private network classification criterion”;
 - 10 ○ Renders invalid asserted ’815 claims 1, 7, 12, 27, 28, 72, 73, 92, and 111; and
 - 11 ○ ’005 claims 49 and 73.
 - 12 ○ The ’815 and ’005 Patents fail to inform those skilled in the art with reasonable
 - 13 certainty about the scope of the term “private network classification criterion,”
 - 14 including in view of VoIP-Pal’s infringement claims and contentions. Neither the
 - 15 claims nor the specifications explain what the criterion or criteria are e.g., what
 - 16 criteria correlate with the private network.
- 17 • “means for causing the private network routing message or the public network routing
- 18 message to be communicated to a call controller to effect routing of the call;”
 - 19 ○ Renders invalid asserted ’815 claim 111 and ’005 claim 73.
 - 20 ○ The ’815 and ’005 Patents fail to inform those skilled in the art with reasonable
 - 21 certainty about the scope of the limitation “means for causing the private network
 - 22 routing message or the public network routing message to be communicated to a
 - 23 call controller to effect routing of the call” because the specification does not
 - 24 provide an adequate structure or algorithm to describe or enable the limitation,
 - 25 including in view of VoIP-Pal’s infringement claims and contentions.
 - 26
 - 27
 - 28

b. '815 Patent

- “determining a match when at least one of said calling attributes matches at least a portion of said callee identifier”;
 - Renders invalid asserted '815 claims 1, 7, 12, and 27.
 - The '815 Patent fails to inform those skilled in the art with reasonable certainty about the scope of the term “determining a match when at least one of said calling attributes matches at least a portion of said callee identifier,” including in view of VoIP-Pal’s infringement claims and contentions. The patent does not define how to compare a calling attribute to a callee identifier, in what way the calling attribute and callee identifier need to match, or what “portion” of the callee identifier and calling attribute must match to be considered a match.
- “means for determining a match when at least one of said calling attributes matches at least a portion of said callee identifier”;
 - Renders invalid asserted '815 claim 28.
 - The '815 Patent fails to inform those skilled in the art with reasonable certainty about the scope of the limitation “means for determining a match when at least one of said calling attributes matches at least a portion of said callee identifier,” including in view of VoIP-Pal’s infringement claims and contentions. The patent does not define how to compare a calling attribute to a callee identifier, in what way the calling attribute and callee identifier need to match, or what “portion” of the callee identifier and calling attribute must match to be considered a match.
- “classifying said call as a private network call when said reformatted callee identifier identifies a subscriber to the private network”;
 - Renders invalid asserted '815 claim 12.
 - The '815 Patent fails to inform those skilled in the art with reasonable certainty about the scope of the limitation “classifying said call as a private network call when said reformatted callee identifier identifies a subscriber to the private

network,” including in view of VoIP-Pal’s infringement claims and contentions. The patent does not define how the reformatted callee identifier identifies a subscriber to the private network.

c. ’005 Patent

- “first network”;
 - Renders invalid asserted ’005 claims 74, 75, 77, 78, 83, 84, 94, 96, and 99.
 - The ’005 Patent fails to inform those skilled in the art with reasonable certainty about the scope of the term “first network” limitations, including in view of VoIP-Pal’s infringement claims and contentions. Neither the claims nor the specification define a first network, or provide what qualities a network must have in order to be a “first” network.
- “second network”;
 - Renders invalid asserted ’005 claims 74, 75, 77, 78, 83, 84, 94, 96, and 99.
 - The ’005 Patent fails to inform those skilled in the art with reasonable certainty about the scope of the term “second network” limitations, including in view of VoIP-Pal’s infringement claims and contentions. Neither the claims nor the specification define a second network, or provide what qualities a network must have in order to be a “second” network.
- “first network classification criterion”;
 - Renders invalid asserted ’005 claims 74, 75, 77, 78, 83, 84, 94, 96, and 99.
 - The ’005 Patent fails to inform those skilled in the art with reasonable certainty about the scope of the term “first network classification criterion,” including in view of VoIP-Pal’s infringement claims and contentions. Neither the claims nor the specification explain what the criterion or criteria are e.g., what criteria correlate with the first network.
- “second network classification criterion”;
 - Renders invalid asserted ’005 claims 74, 75, 77, 78, 83, 84, 94, 96, and 99.

- The '005 Patent fails to inform those skilled in the art with reasonable certainty about the scope of the term “second network classification criterion,” including in view of VoIP-Pal’s infringement claims and contentions. Neither the claims nor the specification explain what the criterion or criteria are e.g., what criteria correlate with the second network.
- “first portion”;
 - Renders invalid asserted '005 claims 74, 75, 77, 78, 83, 84, 94, 96, and 99.
 - The '005 Patent fails to inform those skilled in the art with reasonable certainty about the scope of the term “first portion” of the packet switched network, including in view of VoIP-Pal’s infringement claims and contentions. The patent does not provide any definition of what constitutes or defines a first portion of the packet switched network.
- “second portion”;
 - Renders invalid asserted '005 claims 74, 75, 77, 78, 83, 84, 94, 96, and 99.
 - The '005 Patent fails to inform those skilled in the art with reasonable certainty about the scope of the term “second portion” of the packet switched network, including in view of VoIP-Pal’s infringement claims and contentions. The patent does not provide any definition of what constitutes or defines a second portion of the packet switched network.
- “entity”; and
 - Renders invalid asserted '005 claims 74, 75, 77, 78, 83, 84, 94, 96, and 99.
 - The '005 Patent fails to inform those skilled in the art with reasonable certainty about the scope of the term “entity,” including in view of VoIP-Pal’s infringement claims and contentions. The patent only provides that an “entity” controls a first or second portion of a packet switched network – it does not provide any definition for or qualities of what constitutes such an entity.
- “means for using a caller identifier associated with the caller to locate a caller dialing profile comprising a plurality of calling attributes associated with the caller”;

- Renders invalid asserted '005 claim 73.
- The '005 Patent fails to inform those skilled in the art with reasonable certainty about the scope of the limitation “means for using a caller identifier associated with the caller to locate a caller dialing profile comprising a plurality of calling attributes associated with the caller,” including in view of VoIP-Pal’s infringement claims and contentions. The patent does not provide an adequate structure or algorithm to achieve the function, and does not define how the caller dialing profile is located using a caller identifier, or which calling attributes comprise the caller dialing profile.

Defendants reserve the right to amend this list.

6. The Asserted Patents Are Directed To Patent-Ineligible Subject Matter

All of the Asserted Claims of the Asserted Patents are invalid under 35 U.S.C. § 101 for claiming ineligible subject matter. The basis for the invalidity of the claims under § 101 is set forth in Defendants’ motion to dismiss. *See VoIP-Pal.com, Inc. v. Twitter, Inc.*, No. 18-cv-04523-LHK, Dkt. No. 71; *VoIP-Pal.com, Inc. v. Cellco Partnership*, 18-cv-06054-LHK, Dkt. No.123; *VoIP-Pal.com, Inc. v. AT&T Corp.*, No. 3:18-cv-06177-LHK, Dkt. No. 63; *VoIP-Pal.com, Inc. v. Apple Inc.*, No. 18-cv-06217-LHK, Dkt. No. 75.

7. Document Production

Pursuant to the Court’s Scheduling Order and concurrent with service of these Initial Invalidity Contentions, Defendants are also producing documents related to their Initial Invalidity Contentions. The copies of the documents will be sent under separate cover.

1 Dated: March 18, 2019

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